

Ethnic Differences in Midwife-Attended US Births

Jennifer D. Parker, PhD

ABSTRACT

This study examined US ethnic differences in midwifery care from 1982 through 1989. After adjustment for maternal characteristics, Native American mothers were most likely, and White and Asian mothers were least likely, to obtain midwifery care. For these three groups, midwifery use increased rapidly in the period from 1982 through 1989. Compared with White mothers, Black and Hispanic mothers were more likely to be attended by a midwife; however, their use of midwives increased more slowly. Though the local availability of obstetricians and midwives may determine a woman's choice of care provider, these data suggest that cultural factors also play a role. (*Am J Public Health*. 1994;84:1139-1141)

Introduction

In 1989 nearly 150 000 US births were attended by midwives,¹ up from 60 000 a decade earlier.² Overall, women served by midwives differ from the general population of obstetric patients^{2,3}; compared with all US births in 1988, for example, midwife-attended hospital births (87% of all midwife-attended births) were more common among women who were non-White, younger, less educated, and unmarried.³ The use of midwives for perinatal care has been found to have no adverse effects on birth outcomes,⁵⁻¹¹ in spite of the dominance of women at higher risk for poor pregnancy outcomes among midwife patients. Because incorporating midwives into health care teams has been found to decrease costs,⁵ determining which women may benefit from midwifery care could lead to cost-effective ways of improving maternal and infant health services.

This study investigates the ethnic differences associated with midwifery care. The objective was to document the association between maternal ethnicity and midwife attendance at birth from 1982 through 1989 and to determine how much of that association is explained by additional maternal characteristics. Although maternal characteristics associated with midwifery care have been reported,²⁻⁴ differences between minority groups in the United States have not.

Methods

Nativity files for 1982 through 1989, compiled by the National Center for Health Statistics, were used to examine US births attended by midwives.¹² To better compare physician- and midwife-attended births, this study population was limited to singleton births of infants

weighing at least 2500 g. Births attended by someone other than a physician or midwife were excluded. Five categories of maternal ethnicity were defined by using the race and Hispanic origin data from the birth certificate.¹² Mothers of Hispanic origin were classified as Hispanic regardless of their race. In 1982, 23 states and the District of Columbia reported Hispanic origin of the mother; by 1989, 47 states reported Hispanic origin. However, even in the early 1980s, over 90% of Hispanic residents lived where Hispanic origin was recorded on the birth certificate.¹³

To control for the influence of additional maternal characteristics, the increased odds per year of midwife deliveries and the relative odds of midwifery use by ethnicity were estimated by using multiple logistic regression. Because the proportion of midwife-attended births is low, estimates from logistic regression correspond to the relative increase between years and the relative proportions among ethnic groups; however, these approximations slightly overstate trends for groups with more midwife utilization.¹⁴ Regression models included maternal age, parity, education, first-trimester prenatal care, place of delivery (out of hospital vs in hospital), and marital status. Before 1989 maternal education was not recorded on birth certificates in California, Texas, and Washington; in 1988 and 1989, New York State (outside of New York City) did not collect information on

At the time of the study, Jennifer D. Parker was with the Division of Analysis, National Center for Health Statistics, Hyattsville, Md.

Requests for reprints should be sent to Jennifer D. Parker, PhD, 426 Warren Hall, School of Public Health, University of California, Berkeley, CA 94720.

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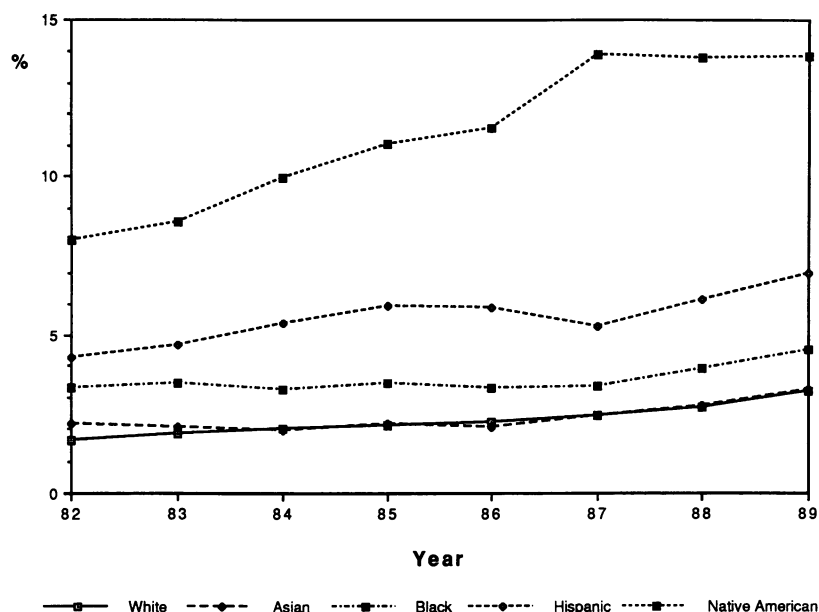


FIGURE 1—Percentage of US midwife-attended births of infants weighing at least 2500 g, by maternal ethnicity, 1982 through 1989.

TABLE 1—Average Percentage Increase and 95% Confidence Intervals (CIs) for Midwife Deliveries per Year, by Maternal Ethnicity, 1982 through 1989

Ethnicity	Unadjusted		Adjusted ^a	
	%	95% CI	%	95% CI
Non-Hispanic White	9.04	8.88, 9.19	7.73	7.57, 7.89
Black	4.06	2.83, 5.31	3.54	3.28, 3.80
Native American	9.77	8.34, 11.21	9.64	8.98, 10.30
Hispanic	6.74	5.46, 8.03	4.10	3.77, 4.43
Asian	7.77	6.26, 9.29	7.16	6.27, 8.06

^aAdjusted for in hospital vs out of hospital, age, parity, education, first-trimester prenatal care, and marital status.

TABLE 2—Relative Odds for Midwife-Attended Delivery, by Maternal Ethnicity, 1982 through 1989

Ethnicity	AOR ^a	95% CI	AOR ^b	95% CI
Non-Hispanic White	Reference		Reference	
Black	1.59	1.58, 1.60	1.39	1.38, 1.40
Native American	5.54	5.47, 5.62	5.12	5.04, 5.19
Hispanic	2.56	2.54, 2.58	2.35	2.33, 2.37
Asian	1.09	1.07, 1.11	1.09	1.09, 1.14

Note. AOR = adjusted odds ratio; CI = confidence interval.

^aAdjusted for year of delivery.

^bAdjusted for year of delivery, in hospital vs out of hospital, age, parity, education, first-trimester prenatal care, and marital status.

education. This analysis was limited to the remaining states and the District of Columbia. Births missing information

about maternal characteristics (fewer than 2% of the remaining births) were also excluded.

Results

Overall, 3.99% of singleton infants weighing more than 2500 g were delivered by a midwife in 1988, compared with 2.09% in 1982. An increase in midwife-attended births was apparent among all groups of women; however, the rate and pattern of increase differed by ethnicity (Figure 1). In 1989, 90% more White, 70% more Native American, 60% more Hispanic, 50% more Asian, and one third more Black women delivered with midwives than in 1982.

On average, midwifery care during this period increased over 7% per year among Native American, Asian, and White mothers, but increased less rapidly among Black and Hispanic mothers (Table 1). The impact of maternal characteristics varied by ethnicity. For example, after adjustment for demographic characteristics, the increased odds of being attended by a midwife rather than a physician dropped by almost one third among Hispanic mothers, but changed little among Native American mothers.

In spite of the rapid increase in midwife-attended births to White mothers during the 1980s, these mothers delivered with midwives less frequently than mothers of all other ethnic backgrounds (Table 2). Except for Asian mothers, adjustment for maternal factors reduced the ratio between White and non-White mothers by approximately 10%. However, Native American mothers remained approximately five times more likely and Hispanic mothers over twice as likely to be attended by a midwife than White mothers.

Discussion

This study documents ethnic differences in midwifery utilization throughout the 1980s in the United States. Compared with other mothers, for example, Native American mothers were the most likely, and White mothers were the least likely, to be attended by a midwife. However, among both groups the use of midwives increased rapidly during that time. Maternal factors, such as education and marital status, explained few of these differences; the unadjusted and adjusted estimates of midwife use were similar. The geographic distributions of ethnic groups, as well as of perinatal care providers, within the United States likely determined most of these differences.^{3,4,9}

However, cultural preferences for physicians or midwives may also have

contributed to these findings. Acceptance of midwives may have expanded more rapidly among White mothers than among Black mothers, for example. Although White mothers were the least likely to be attended by a midwife, their use of midwives rose during the 1980s. This increase led to a rising proportion of midwife-attended White births during that time.³

Reports from 1989 birth certificates document maternal differences by type of midwife provider.^{1,4} Unfortunately, before 1989, birth certificates were not that detailed; therefore, the term "midwife" in this study refers to both certified nurse-midwives and midwives with other training. Furthermore, Adams reported that more than 10% of certified nurse-midwives do not sign birth certificates,¹⁵ also affecting comparisons between midwife and physician patients.

Nonetheless, the relatively high use of midwives by minority women and the overall increase in midwife-attended births throughout the 1980s suggest that midwifery is expanding to fill health care gaps. An understanding of ethnic differences in midwifery utilization may assist planners

in effectively planning obstetric services in local communities. □

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